

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 14 JUN 2005

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Applicant's or agent's file reference 501769 MSB/jal	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/NZ2004/000144	International filing date (day/month/year) 7 July 2004	Priority date (day/month/year) 7 July 2003	
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ A61D 7/00			
Applicant IMPIAN TECHNOLOGIES LIMITED et al			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input checked="" type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 5 May 2005	Date of completion of the report 1 June 2005
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer MATTHEW FORWARD Telephone No. (02) 6283 2606

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NZ2004/000144

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1 (b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1 to 5, 7 to 23 as originally filed/furnished
 - pages* 6 received by this Authority on 5 May 2005 with the letter of 5 May 2005
 - pages* received by this Authority on with the letter of
- ☒ the claims:
- pages 25 to 29 as originally filed/furnished
 - pages* as amended (together with any statement) under Article 19
 - pages* 24, 30 received by this Authority on 5 May 2005 with the letter of 5 May 2005
 - pages* received by this Authority on with the letter of
- ☐ the drawings:
- pages 1/7 to 7/7 as originally filed/furnished
 - pages* received by this Authority on with the letter of
 - pages* received by this Authority on with the letter of
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NZ2004/000144

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1 to 53	YES
	Claims	NO
Inventive step (IS)	Claims 1 to 53	YES
	Claims	NO
Industrial applicability (IA)	Claims 1 to 53	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

The following documents identified in the International Search Report have been considered for the purposes of this report:

- D1 US 1476500 (EMONTS)
- D2 US 4502417 (JENKINS)
- D3 BE 861376 (CROSSET)
- D4 BE 1007090 (VERDRONCKEN)
- D5 US 3422814 (LLOYD)
- D6 SU 370944 (BOGACHENKO et al)
- D7 DE 3120409 (RHEINTECHNIK WEILAND & KASPAR KG)
- D8 WO 1999043269 (GIBSON et al)

The present application defines a an apparatus to "position an item in or near a natural orifice of a non-human animal", the apparatus having one or more rods positioned near the orifice, a cross member between the rods biased into contact with the animal in the region of the orifice and some means to anchor the rods to the animal at a location spaced from the orifice.

Independent claim 1 defines that the cross member is biased into contact with the animal as a result of the resilience of the rod. Independent claim 43 specifies that there must be two rods, the apparatus is located at the rump of the animal and a sensor is attached to the cross member for sensing when the animal is urinating. Claim 48 further defines that the cross member has an item to be inserted into the orifice and claims 50 and 53 define that an insertion portion and the cross member are formed as a single T-shaped member. Claim 51 defines that the cross member is moveable along the second portions of the rods in response to movement of the animal

Document D1 discloses a harness worn about the mouth of an animal, with rods (3), cross member (6), anchoring means (5) and a tube (1) inserted into the mouth that facilitates insertion of medicine into an animal. The cross member has a slot to accommodate the tube (1) and is connected to the rods via a thumb screw (8) and slot (10) arrangement.

Document D2 recites a harness that fits about the posterior of a dog such that a pouch to collect droppings may be so positioned. It is considered to disclose anchoring means (17), rod members (18), cross member (25) integral with the rod and an item (20) that is positioned near a natural orifice of an animal.

Document D3 provides a device to detect water burst in animals by inserting electrodes on a probe into the vagina of the animal. The probe is held in place using a flexible harness with a physical similarity to the arrangement of the present claims. However where the claimed invention defines resilient rods, D3 discloses flexible straps.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

Document D4 provides a probe supported in the vagina using a flexible harness arrangement; D5 recites a tube inserted into the uterus with a foam pad (42) to protect the animal from injury; D6 is directed to a frame clamped to a bench that supports the animal's head and an anaesthetic mask; D7 has a thin sheet of Aluminium with a sensor attached held in place using a flexible harness.; and D8 recites a irrigation probe held in place using a flexible harness.

None of documents D1 to D8 either alone or in combinations obvious to one of ordinary skill in the art disclose an apparatus as defined in the independent claims. Claims 1 to 53 are considered to be novel, have an inventive step and an industrial application and thus satisfy Articles 33(2) to 33(4) of the PCT.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NZ2004/000144

Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

Application No. <u>Patent No.</u>	Publication date <u>(day/month/year)</u>	Filing date <u>(day/month/year)</u>	Priority date (valid claim) <u>(day/month/year)</u>
P,A US 6647928	18 November 2003	21 November 2000	21 November 2000

This document provides a flexible harness to secure a cover for a female animal's vagina. The arrangement of the present claims is not suggested by this document.

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure _____	Date of non-written disclosure <u>(day/month/year)</u>	Date of written disclosure referring to non-written disclosure <u>(day/month/year)</u>
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of the animal in the vicinity of the orifice. These adhesive pads are easily removed by the animal rubbing the area.

It is an object of preferred embodiments of the present invention to provide an apparatus for positioning an item in or near a natural orifice of a non-human animal which addresses some of the disadvantages outlined above, and/or which at least provides the public with a useful choice.

Summary of the Invention

In accordance with a first aspect of the present invention, there is provided an apparatus for positioning an item in or near a natural orifice of a non-human animal, including: at least one resilient rod having a first portion adapted to the shape of part of the animal's body spaced from the orifice and a second portion adapted to extend to or beyond the part of the animal's body in the region of the orifice; an anchoring arrangement to anchor the rod(s) to said part of the animal's body spaced from the orifice; and a transverse cross member supported by the second portion(s) of the rod(s), which cross member is adapted in use to be biased in a direction generally orthogonal to the second portion(s) of the rod(s) into contact with the animal's body in the region of the natural orifice as a result of the resilience of the rod(s).

In a preferred embodiment, the rod(s) has/have sufficient stiffness that it/they fit the shape of said part of the animal's body spaced from the orifice, but will then maintain that shape in the absence of manual shaping.

The natural orifice may be a vagina, anus, mouth, or nostril of the animal for example.

In one embodiment, the cross member may include or be attached to a sensor to sense a body condition or occurrence. The apparatus may be used for a posterior or anterior orifice of the animal. The apparatus is preferably adapted such that the second portion(s) of the rod(s) overhang a posterior region of the animal's body. The sensor is preferably configured to determine whether the animal is urinating.

The cross member may include an arrangement to dispense a substance, more preferably in response to sensing of a body condition or occurrence. In a particularly preferred embodiment, the arrangement is adapted to dispense substances such as micronutrients,

CLAIMS

1. An apparatus for positioning an item in or near a natural orifice of a non-human animal, including: at least one resilient rod having a first portion adapted to the shape of part of the animal's body spaced from the orifice and a second portion adapted to extend to or beyond the part of the animal's body in the region of the orifice; an anchoring arrangement to anchor the rod(s) to said part of the animal's body spaced from the orifice; and a transverse cross member supported by the second portion(s) of the rod(s), which cross member is adapted in use to be biased in a direction generally orthogonal to the second portion(s) of the rod(s) into contact with the animal's body in the region of the natural orifice as a result of the resilience of the rod(s).
2. An apparatus as claimed in claim 1, wherein the rod(s) has/have sufficient stiffness that it/they fit the shape of said part of the animal's body spaced from the orifice, but will then maintain that shape in the absence of manual shaping.
3. An apparatus as claimed in preceding claim 1 or 2, wherein the cross member includes or is attached to a sensor to sense a body condition or occurrence.
4. An apparatus as claimed in claim 3, wherein the apparatus is adapted such that the second portion(s) of the rod(s) overhang(s) a posterior region of the animal's body.
5. An apparatus as claimed in claim 4 wherein the sensor is configured to determine whether the animal is urinating.
6. An apparatus as claimed in any one of the preceding claims, wherein the cross member includes an arrangement to dispense a substance.
7. An apparatus as claimed in claim 6 wherein the arrangement to dispense comprises a receptacle in the cross member or a tube which is in fluid connection with a separate reservoir.
8. An apparatus as claimed in claim 6 or 7, wherein the cross member includes or is attached to a sensor to sense a body condition or occurrence, and the arrangement to

portion adapted to extend to or beyond the part of the animal's body in the region of the orifice; an anchoring arrangement to anchor the rods to said part of the animal's body spaced from the orifice; and a substantially T-shaped member, which includes a transverse cross member connected to and extending between the second portions of the rods and an insertion portion for insertion into the orifice of the animal, the cross member being moveable relative to the rods in response to movement of the animal.

51. An apparatus for positioning an item in a natural orifice of a non-human animal, including: two resilient rods each having a first portion adapted to the shape of part of the animal's body spaced from the orifice and each having a second portion adapted to extend to or beyond the part of the animal's body in the region of the orifice; an anchoring arrangement to anchor the rods to said part of the animal's body spaced from the orifice; and a cross member connected to and extending between the second portions of the rods, the cross member being arranged for connection to an item to be inserted into the orifice of the animal, wherein the cross member is moveable along the second portions of the rods in response to movement of the animal.

52. An apparatus as claimed in claim 51, wherein the item is removable from connection with the cross member and interchangeable with another item.

53. An apparatus for positioning an insertion portion of a member in a natural orifice of a non-human animal, including: two resilient rods each having a first portion adapted to the shape of part of the animal's body spaced from the orifice and each having a second portion adapted to extend to or beyond the part of the animal's body in the region of the orifice; an anchoring arrangement to anchor the rods to said part of the animal's body spaced from the orifice; and a substantially T-shaped member, which includes a transverse cross member connected to and extending between the second portions of the rods and an insertion portion for insertion into the orifice of the animal, wherein the cross member is moveable along the second portions of the rods in response to movement of the animal.